

THE UNITED STATES DISTRICT COURT FOR  
SOUTHERN DISTRICT OF NEW YORK

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GENOA COLOR TECHNOLOGIES, LTD.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 07-CV-6233
	)	
MITSUBISHI ELECTRIC CORP.;	)	(JURY TRIAL DEMANDED)
MITSUBISHI ELECTRIC US HOLDINGS, INC.;	)	
MITSUBISHI ELECTRIC AND	)	
ELECTRONICS USA, INC.;	)	
MITSUBISHI DIGITAL ELECTRONICS	)	
AMERICA, INC.; SAMSUNG	)	
ELECTRONICS CO., LTD.; SAMSUNG	)	
ELECTRONICS AMERICA, INC.	)	
	)	
Defendants.	)	
-----X	)	

**PLAINTIFF'S CLAIM CONSTRUCTION BRIEF**

**I. INTRODUCTION**

Genoa alleges infringement of claims 1-10 in U.S. Patent No. 7,113,152 (the "152 patent"). Claims 2-10 are dependent from claim 1.

Genoa's proposed claim construction of each element of the asserted claims is set forth in tabular form in section IV of this Brief, including intrinsic and extrinsic evidence supporting Genoa's proposed construction. In support of its construction, Genoa submits the declaration of its expert witness, Louis D. Silverstein, Ph.D. Genoa requests an opportunity to present the testimony of Dr. Silverstein at the Markman hearing in this action in the form of a technology tutorial as well as a commentary on the meanings of the terms of the asserted claims from the viewpoint of one of ordinary skill. Depending on the Court's interest in having a full technology

tutorial, Genoa believes that it will take approximately a half day to present its case at the claim construction hearing.

Following its proposed construction as to each element of the claims, Genoa explains why defendants' proposed construction is erroneous. Genoa reserves the right to further address that issue in a reply brief pursuant to the Amended Case Management Order.

## **II. THE LAW OF CLAIM CONSTRUCTION**

A patent infringement analysis involves two steps: (1) construction of the patent claim at issue, followed by (2) a comparison of the claim thus construed to the accused device. *Bai v. L&L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir. 1998). The former is a question of law for the court, while the latter is a question of fact for the jury. *Markman v. Westview Instruments*, 517 U.S. 370, 384-391 (1996); *Catalina Marketing Int'l v. Coolsavings.com, Inc.*, 289 F.3d 801, 812 (Fed. Cir. 2002).

No reference to the accused device should be made during the claim construction step. *Young Dental Mfg. Co. v. Q3 Special Products, Inc.*, 112 F.3d 1137 (Fed. Cir. 1997). It is only after the claims have been construed without reference to the accused device that those claims, so construed, are applied to the accused device to determine infringement. *SRI International v. Matsushita Elec. Corp.*, 775 F.2d 1107 (Fed. Cir. 1985).

The decision of the Federal Circuit in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*) articulates the standards for claim construction. Claim construction starts with the words of the claims, which define the patented invention. *Id.* at 1312. The claims themselves provide substantial guidance as to the meaning of particular claim terms, including the context in which a term is used in the asserted claim and the terminology of other claims in the patent. *Id.* at 1314-15. The words of the claims are generally given their ordinary and

customary meaning, which is the meaning that the claim term would have to a person of ordinary skill in the art at the time of the effective filing date of the patented invention. *Id.* at 1312-14; *Vitronics Corp. v. Conceptiontronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Inventors are typically persons skilled in the field of the invention. *Phillips*, 415 F.3d 1303 at 1314. The person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which it appears, but also in the context of the entire patent, including the specification. *Id.*

In cases where the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent, claim construction “involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314. Where the meaning of the claim term is not “immediately apparent,” the court looks to the sources available to the public that show what a person of skill in the art would have understood the disputed claim language to mean. *Id.* at 1314. Of those sources, the specification is “the single best guide to the meaning of a disputed term.” *Id.* at 1315. *Phillips* noted that “[i]t is . . . entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.” *Id.* at 1317. The specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such case, the inventor’s lexicography governs. *Id.* at 1316.

The court should also consider the patent’s prosecution history. *Id.* at 1317.

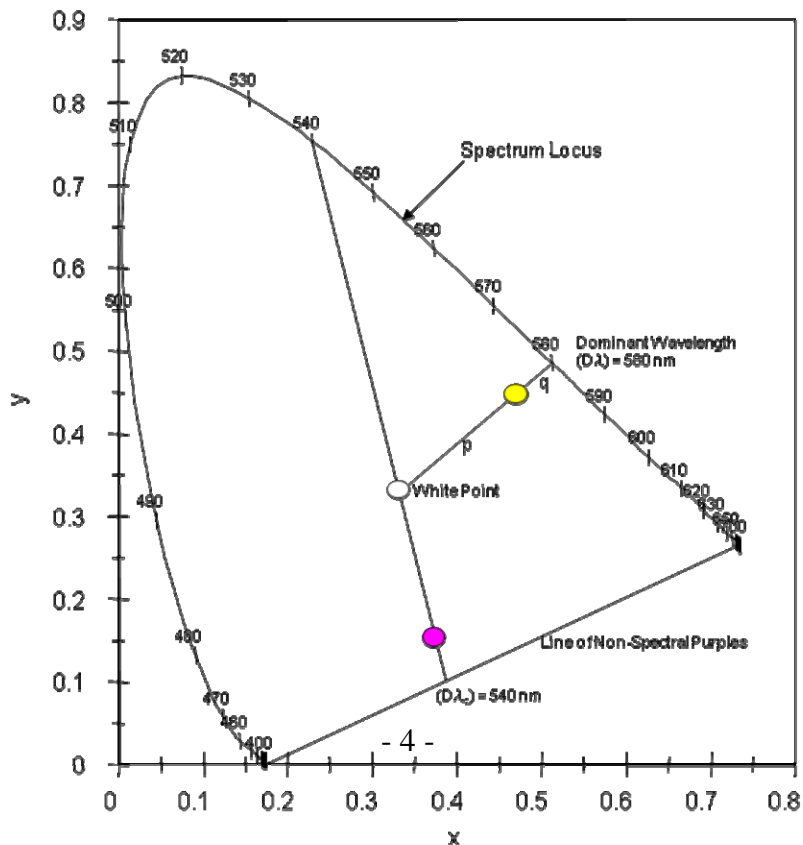
Extrinsic evidence, such as expert and inventor testimony, dictionaries, and learned treatises, may be admitted and used by the district court in its sound discretion. *Id.*

A term in the preamble to a claim that serves as an “antecedent basis” functions as a separate limitation. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006). Where the body of a claim explicitly refers back to a preamble term – especially when using the word “said” (*i.e.*, referring back to “said” preamble term) – that preamble term provides an antecedent basis for the term as found in the body, and limits the claimed invention. *See, e.g., Eaton Corp. v. Rockwell International Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003).

### III. OVERVIEW OF THE RELEVANT TECHNOLOGY AND THE ‘152 PATENT

Through the testimony of Dr. Silverstein, Genoa expects to provide background information relating to the technology at issue as well as Genoa’s patented invention. Dr. Silverstein’s expected testimony is described in his declaration, and summarized below.

Conventional electronic displays such as those employed on televisions, computer monitors, and projectors do not display the full range or gamut of colors visible to the human visual system (HVS). The following is a CIE 1931 chromaticity diagram which depicts a horseshoe-shaped space representing the full range of wavelengths corresponding to colors



visible to the HVS:

All colors discernable by the HVS lie either on or within the boundaries of this horseshoe-shaped area, which is often designated as the MacAdam Limits and may be considered the color gamut of the HVS. The points on the border of the horseshoe, known as the spectrum locus, are the chromaticity coordinates (xy values) corresponding to wavelengths in the visible light range for human observers which is from 380 nm (blue) to 780 nm (red). These points are known as dominant wavelengths. The white point, which is a point at which the HVS perceives the color “white,” lies near the center of the closed area. The distance of a color from the white point toward the spectrum locus (pure spectral colors) provides an estimate of the purity or saturation of a color. The straight line closing the horseshoe from below, between the spectral extremes at the long (780 nm) and short (380 nm) wavelengths, is known as the line of non-spectral purples. Visible light containing light of a plurality of spectra lies inside the gamut.

Conventional televisions, computer monitors, and other electronic displays utilize only a limited portion of the full-color gamut that consists of colors obtained by combinations of only three primary colors, typically red, green and blue (“RGB”). Triangle 20 in Fig. 2 of the ‘152 patent, reproduced below, constitutes the RGB triangle typical of conventional color display technology and depicts the corresponding portion of the full-color gamut visible on such conventional displays:

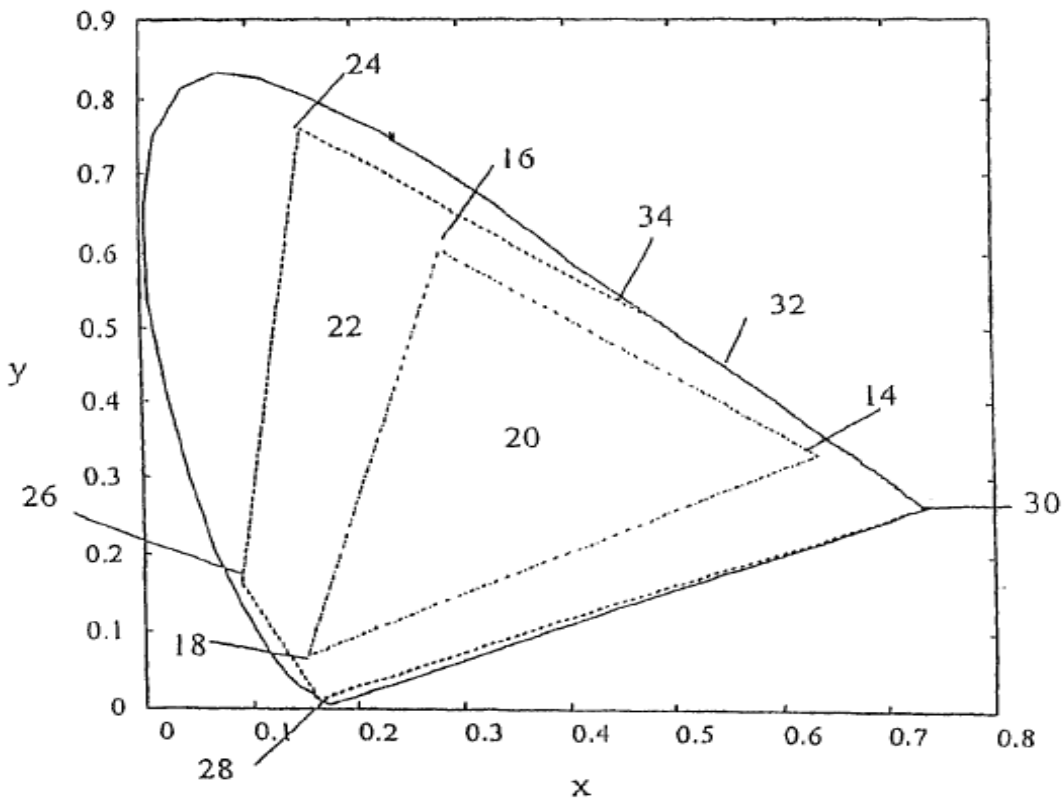


Fig. 2

The convex, curvilinear shape of the visual color gamut is determined by well-known aspects of human color vision physiology. As such, it is apparent that not all visible colors can be reproduced from mixtures of any fixed set of three primary colors and that the color gamut associated with the conventional set of RGB primary colors (20) occupies only a fraction of the total visual color gamut. While the primary color points and hence the vertices of the RGB triangle can be manipulated to revise and even expand the range of displayed colors in some circumstances, increasing the color space in this manner typically results in a substantial loss of luminous efficiency. This in turn results in a decrease in display luminance and/or an increase in display power consumption.

It should be recognized that a “primary color” is an elementary color of a color imaging system. The imaging system combines primary colors in various proportions to visually synthesize a range of mixture colors. Thus, a primary color of an imaging system is a color not constructed from mixtures of other colors. Any point within the visual color gamut could constitute a primary color. Consequently, there are an infinite number of potential primary colors. For purposes of the present discussion, it is sufficient to understand that primary colors are the building blocks of other colors.

The greater the number of primary colors utilized in an imaging system, the greater the number of vertices in the corresponding color gamut. In general, this results in a greater percentage of the full visual color gamut encompassed by the area enclosed by those vertices. For example, the hexagonal shape designated as 22 in Fig. 2, with vertices 24, 26, 28, 30, 32, and 34, representing six primary colors, provides a visible gamut much larger than the triangle 20 produced by conventional RGB primaries. An imaging system employing, for example, five primary colors provides, in the words of the ‘152 patent, an “expanded color space” (‘152 patent, col. 1, ln. 20) in comparison to the color space created by an imaging system using only three primary colors (e.g. RGB) from an equivalent light source.

The use of a multi-primary (more than three primary colors) electronic display provides a more pleasing and intense visual experience for the viewer than a conventional RGB display. In addition, it substantially increases the luminance and perceived brightness of the display produced with a light source of a given intensity.

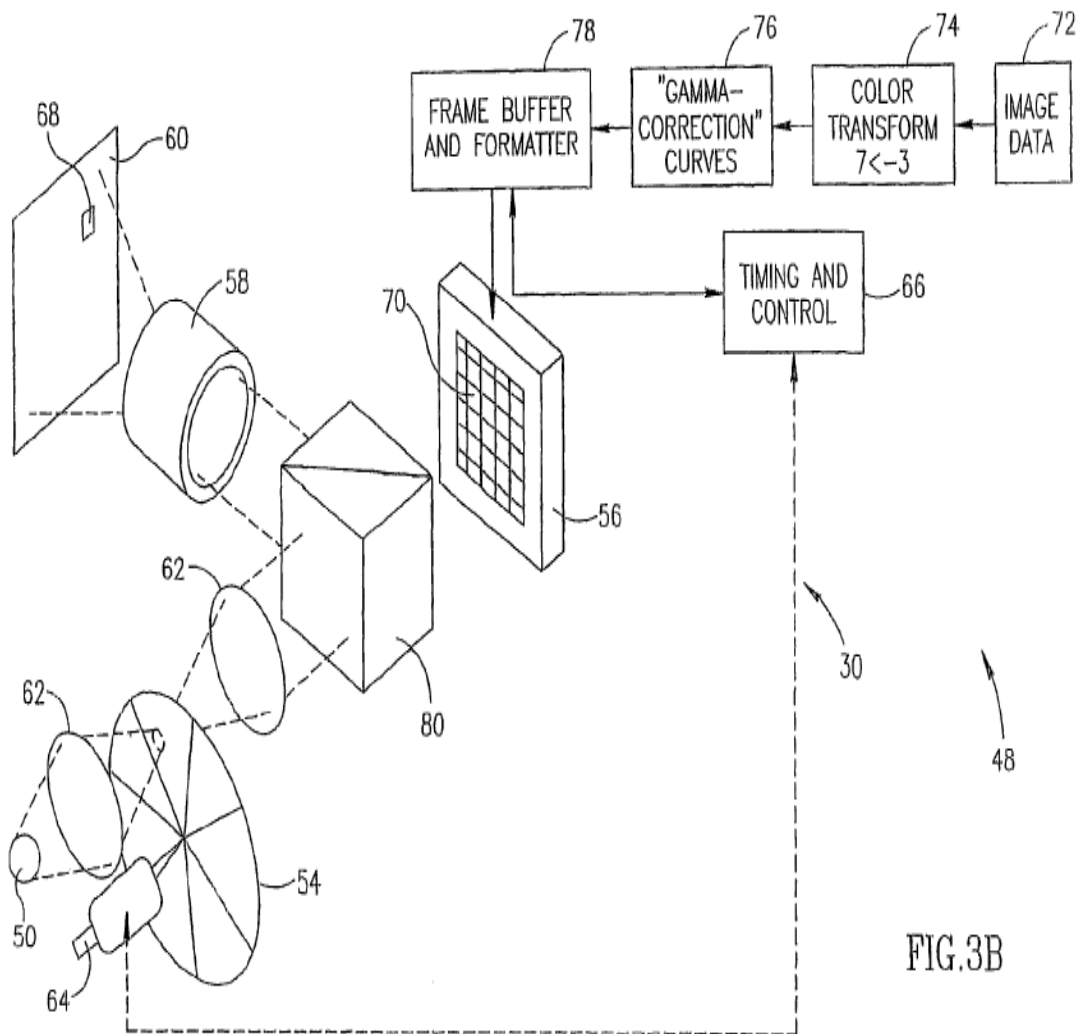
At the time of the invention of the ‘152 patent, virtually all commercial color displays were based on three primaries, represented by three primary colors, RGB. Others in the industry knew there was a long felt need for multi-primary electronic displays. More specifically, many

in the industry knew that if multi-primary electronic displays were successfully implemented, they would be commercially valuable. However, the industry faced a serious limitation in achieving such an implementation, because essentially all televisions and computer monitor displays were based on only three-primary color input data. In other words, the images captured by television cameras and computer signals for display on electronic monitors were characterized in terms of three-component values corresponding to three primary colors. While it would be possible to create a new standard for televisions, in which television cameras capture images that are characterized in terms of more than three primary colors, such a change would in effect require scrapping the entire TV infrastructure and building it anew. While the technology existed for electronically displaying images composed of more than three primary colors, prior to the invention here at issue no existing methodology was available to enable that display technology to accurately and efficiently render color images structured for the existing three-primary TV and computer monitor technology. The '152 patent solved that problem.

The challenge facing the inventors of the '152 patent was to combine multi-primary display technology with a methodology and an algorithm for converting the standard three-component RGB data input from conventional televisions and the like to produce a displayed full-color image using more than three primary colors. Moreover, the inventors sought a method of color conversion which provided both color reproduction accuracy and utilization of all of the primary colors of the multi-primary display technology. Utilization of all of the primary colors substantially improves the optical and power efficiency of the display. The '152 patent teaches and claims a method that meets this challenge. The '152 patent is directed to the full range of display technology, including: (1) projection display systems in which light of multiple primary colors illuminates a viewing screen; (2) direct-view displays composed of self-luminous or



emissive picture elements (pixels) such as cathode ray tubes (CRTs), field-emission displays (FEDs), plasma display panels (PDPs), light-emitting diode (LED) displays, and LEDs composed of organic semiconductor materials (OLEDs); and (3) direct-view displays composed of optically switching pixels which modulate the light from an extrinsic illumination source such as liquid crystal display (LCD) screens in which each of the pixels has an individual color filter. Rather than describing each of these types of display systems in detail, it suffices here to describe a preferred embodiment disclosed by the inventors that can be used in rear projection televisions as well as by front projectors. Fig. 3B of the '152 patent depicts such a preferred embodiment, and is reproduced below:



As shown in Fig. 3B, polychromatic or “white” light from light source 50 is focused by condensing lens 62 and shines through rapidly spinning color wheel 54. The color wheel contains color filters forming colored light of more than three primary colors. Each successive filter in the color wheel causes the white light passing through the filter to assume the spectrum of that particular primary color. The white light being projected through the color wheel thus

becomes separated into a succession of primary colored lights in accordance with the rotation of the color wheel.

After passing through the color wheel, the colored light then illuminates a “spatially modulated mask” or spatial light modulator (SLM) shown as item 56 in Fig. 3B. Under one preferred embodiment, the SLM is a “digital micro-mirror device” or “DMD” consisting of an array of tiny mirrors, each of which has at least two positions, either reflecting light toward or away from viewing screen 60. In general, each mirror on the DMD corresponds to a pixel in the displayed image.<sup>1</sup> Thus, when the image to be displayed requires a particular pixel to have a particular primary color, the specific mirror shown as item 70 on Fig. 3B alters its position to reflect light of that specific primary color onto a particular pixel of the viewing screen only when the light of that color passes through the filter of the color wheel having that same color and reaches the mirror. The individual pixels comprising the image at the viewing screen are thus illuminated sequentially by the SLM, and the HVS integrates these sequentially illuminated pixels into an image. The combination of the color wheel and the SLM thus enable light of more than three primary colors to be projected onto specific pixels of the viewing screen.

The challenge facing the inventors was to devise a method by which the individual mirrors of the SLM could be instructed to position themselves so as to form a multi-primary colored image coming from, *e.g.*, a television camera, when the data signal coming from the television camera was not a multi-primary data signal, but merely consisted of a three-component (*i.e.*, RGB) data signal. Thus, with reference to Fig. 3B, it was necessary for the inventors, starting with image data comprised of three primary colors shown as item 72, to

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<sup>1</sup> In some cases display resolution is larger than the number of pixels of the SLM and each SLM pixel addresses more than one position on viewing screen.

convert such image data into multi-primary image data that could be used to position the mirrors of the SLM properly and synchronize their control with the rotating multi-primary color wheel so as to construct a multi-primary image for display on the viewing screen. This process of color data transformation is schematically represented by multi-color transformation module 74, gamma correction module 76, and frame buffer and formatter module 78. The patent describes in detail the method followed to convert image data composed of three primary colors into multi-primary image data (*i.e.*, more than three primary colors), and schematically depicts that process in Fig. 6B of the '152 patent. By marrying the converted image data with the above-described multi-primary light projection technology, the '152 patent provides a method for creating a full-color image made up of more than three primary colors. Under the method of the '152 patent, the inventors provide multi-primary color algorithms to convert three-primary input data to a multi-primary display format. The Genoa method utilizes all primary colors employed by the system, rather than merely subsets of the available system primaries, to provide an appropriate set of values for each selected color or image pixel.

#### **IV. CONSTRUCTION OF THE CLAIMS IN SUIT**

The following table sets forth in columnar form, from left to right: (1) the elements of each of the claims asserted by Genoa; (2) the claim construction proposed by Genoa; and (3) the support relied on by Genoa for its proposed claim construction.<sup>2</sup> The specific terms construed in column 2 are those claim elements or portions thereof that are shown in bold type in column 1. In the third column, Genoa identifies the specific line and page references of the specification to

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<sup>2</sup> Parenthetical references to the specification of the '152 patent are to columns and lines, for example, (3:10-15).

which it wishes to draw the Court's attention, as well as applicable expert testimony and relevant portions, if any, of the prosecution history.

<b>Claim and Claim Element</b>	<b>Genoa's Proposed Construction</b>	<b>Support for Genoa's Proposed Construction</b>
1. A method of producing a <b>color image</b> comprising:	an image including a plurality of pixels, at least some of which are made up of at least four non-white and non-black colors.	<p>The preamble constitutes a limitation of claim 1, because its reference to "color image" provides an antecedent basis for the term, "said color image" that occurs in the body of the claim as discussed below.</p> <p>Claim 1 on its face states that "said color image" is produced by spatially modulating light of at least four colors (see below).</p> <p>One of ordinary skill would understand the term, "color image" as shown on an "electronic true color display" (1:2) to require and consist of a plurality of pixels, each of which corresponds to a portion of the image. (9:11)</p> <p>As stated in the Abstract, the invention is for "a device, system and a method for displaying image data of a plurality of colors, the device comprising a light source for producing light of having at least four primary colors," and "is not limited to combinations of colors which are produced from only three primary colors, such as red, green and blue."</p> <p>The "Summary of the Invention" discloses "a device for displaying image data of a plurality of colors, the device comprising a light source for producing light having at least four primary colors and a viewing screen for displaying the image," including "projecting the light of each primary color according to the path onto the viewing screen to form the image." (4:44-55)</p> <p>The invention is for "displaying an expanded gamut of colors." (4:8-9) In this context, one of ordinary skill would understand that black does not constitute a primary color.</p>

		<p>The “color image” is an image projected onto a viewing screen (9:13-15) that consists of a “full color image” with “a wide gamut of colors.” (10:2, 19-20)</p> <p>At the time of the invention, one of ordinary skill would have understood that the term “color image” means an image including a plurality of pixels, made up of at least four non-white and non-black colors.</p>
projecting <b>polychromatic light</b> from a light source onto a first side of a color wheel having at least four non-white and non-black color filters;	light including a plurality of wavelengths	One of ordinary skill would understand that the term “polychromatic light” refers to light including a plurality of wavelengths. The specification refers to “white or polychromatic” light. (4:16) It discloses further that when white light is passed through a filter, it forms colored light of a defined spectral range. (8:65-67)
rotating said color wheel such that the polychromatic light from said light source is sequentially filtered by transmission through said at least four color filters to sequentially produce at a second side of said color wheel, opposite said first side, light of at least four colors, each of said at least four colors having a different chromaticity from the others of the at least four colors; and	no construction needed	The terms included in this element all possess their ordinary meanings.

<p><b>spatially modulating</b></p>	<p>varying the intensity and/or color and/or angular distribution and/or polarization of light as a function of spatial position</p>	<p>"The light beam is spatially modulated by spatially modulated mask 56, so that the apparent brightness of each primary color varies a different portion of the viewing screen 60 . . ." (10:7-10)</p> <p>As shown on Figure 3B, light of at least four colors shines sequentially on spatial modulator 56 that possesses individual pixels 70. In the case of a DMD or digital micro-mirror device, each pixel of the DMD represents a mirror that is controlled to direct light toward viewing screen 60 or away from viewing screen 60 in accordance with a data signal providing data input 44 as shown in Figure 3A and image data 72 as shown in Figure 3B. (9:43-45; 9:56-10:20; 8:19-53)</p> <p>The specification discloses a variety of ways in which "spatial modulation" can occur. "The spatial modulation can optionally be performed with analog or binary levels or gradations, according to the type of modulator device which is used. Nematic liquid crystal modulators, for example . . . allow for analog 'grey levels'", "if a binary modulator device is used for spatial modulation "grey levels" are achieved by controlling the duration of the illumination, and/or the intensity of the light incident on the spatial modulator." (7:38-41)</p> <p>"In this context, LCD features an organized structure of anisotropic molecules, for which the axis of anisotropy is rotated by the application of voltage, thereby rotating polarization." (9:27-30)</p> <p>The specification further discloses varying intensity by varying polarization in LCD spatial modulators. (9:22-25) "Examples of the binary modulation type include, but are not limited to, DMD, FLC, quantum well modulator and electro-optical modulator. DMD (digital micro-mirror device) is an array of mirrors, each of which has two positions, either reflecting light toward a viewing screen 60, or reflecting light away from viewing screen 60." (9:41-46)</p>
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		At the time of the invention, one of ordinary skill would have understood that the term “spatially modulating” encompasses each of the means of varying light as a function of position as set forth in Genoa’s proposed construction.
said light of at least four colors in accordance with a <b>data signal</b>	a signal representing an image in terms of a plurality of pixels, each having exactly three component values, e.g., RGB, XYZ, YCC, etc.	<p>The data signal providing digital image data 72 as shown in Figure 3B is a signal that presents three component values for each pixel (<i>e.g.</i>, Red, Green, Blue or “RGB”). (10:39-63) The input data is shown in Figure 6B as “RGB input data.” (14:34-38). The RGB signals may be transformed into other combinations having three component values using “YCC-type data formats.” (10:60-63) In either case, the input “data signal” is a signal representing pixels, each of which has exactly three component values, <i>e.g.</i>, RGB or YCC-type data. (11:16-18)</p> <p>At the time of the invention, one of ordinary skill would have understood that the term “data signal” to have the meaning as set forth in Genoa’s proposed construction.</p>
to <b>produce said color image.</b>	construct an image from a plurality of pixels, at least some of which are made up of at least four non-white and non-black colors	<p>By means of the steps of color transformation 74, gamma correction 76, frame buffer 78, and timing and control 66, all as shown in Figure 3B, the three component (<i>e.g.</i>, RGB) data signal providing image data 72 is converted so that, by means of spatial modulator 56, it provides a color image made up of individual positions 68 on the viewing screen 60. The color image is a full color image made up of more than three primary colors. “The human viewer integrates the sequential stream of the primary images to obtain a full-color image with a wide gamut of colors when viewing the image as projected onto viewing screen 60.” (10:16-21)</p> <p>Under Figure 6B, this transformation commences with a three color RGB input and ends with a seven color data output. In any event, the result is the construction of an image from a plurality of pixels, at least some of which are made up of at least four non-white and non-black colors. (10:18-20) Thus, “the use of such [RGB or YCC-type] requires the</p>



		<p>data to be transformed into a format which is suitable for a display including at least four primaries.” (14:16-18)</p> <p>At the time of the invention, one of ordinary skill would have understood that the term “produce said color image” to have the meaning as set forth in Genoa’s proposed construction.</p>
2. The method of claim 1, wherein each of said at least four light colors is produced at least once during one rotation of said color wheel.	<i>See</i> Claim 1. Otherwise no construction needed	One of ordinary skill would understand that the terms in this claim element have their ordinary meanings.
3. The method of claim 1, further comprising operating a motor attached to said color wheel for rotating said color wheel.	<i>See</i> Claim 1. Otherwise no construction needed	One of ordinary skill would understand that the terms in this claim element have their ordinary meanings.
4. The method of claim 1, further comprising projecting said filtered light onto a viewing screen.	<i>See</i> Claim 1. Otherwise no construction needed	One of ordinary skill would understand that the terms in this claim element have their ordinary meanings.
5. The method of claim 1, wherein said <b>spatially modulating</b> said light comprises	<i>See</i> Claim 1.	<i>See</i> Claim 1 for the construction of “spatially modulating.”
<b>selectively activating</b> a spatial light modulator	controlling the individual pixels of	The individual pixels of the spatial light modulator are controlled. “The light beam is spatially modulated by spatially modulated mask 56 so that the apparent brightness of each primary color varies

		at different portions of viewing screen 60, typically <u>according to each pixel of the image</u> . Each position 68 on viewing screen 60 is preferably associated with a certain pixel 70 and spatially modulated mask 56. The brightness of that position is determined by the relevant data pixel in the image.” (10:7-14)
6. The method of claim 5, wherein said spatial light modulator is a <b>digital micro-mirror device</b> (DMD).	<i>See</i> Claims 1 and 5.  a two-dimensional arrangement of mirrors, each of which has at least two orientations, each of which orientations reflects light in a different direction	( <i>See</i> 9:43-45)
7. The method of claim 5, wherein said <b>selectively activating</b> said spatial light modulator comprises activating said spatial light modulator to sequentially modulate the light of said at least four different colors	<i>See</i> Claims 1 and 5.  controlling the individual pixels of	<i>See</i> Claims 1 and 5.
8. The method of claim 1, further comprising <b>converting</b>	<i>See</i> Claim 1.  transforming	The “color transform” module 74 as shown in Figure 3B converts the three-color input to an output of more than four primary colors by transforming the data. (11:16-21; 14:16-18; 16:62-63) (transformation of RGB data to a format suitable for displaying with at least four colors)

<b>three-color data representing said color image in terms of three colors</b>	an image represented by a plurality of pixels, each having exactly three component values	<i>See</i> Figure 3B image data 72 and Figure 6B; description of data flow in which data representing color image in terms of three colors is transformed. (10:39-11:21)
into <b>converted image data representing said color image in terms of said at least four different colors.</b>	<b>“converting three color data...into converted image data”</b> means, for every pixel in the input data, transforming each three-component pixel into a pixel having at least four (potentially non-zero) colors, each of the at least four colors corresponding to a non-white and non-black filter	The input data is “a signal representing the R, G and B values of pixel-after-pixel, line after line for a film frame.” (10:45-46; 54-55) Data arriving in analog video signal form is transformed into digital data. (10:42, 65) The “digital RGB image data or YCC-type data is then manipulated in a multi-color transformation module 74 . . . into a color format which includes data for each color of color filters 52, with N-bits of data per color (for example, seven colors, of which one is white, and 8 bits per color).” (11:16-21) Thus, each pixel of the converted image data has at least four color components. The values of some of those component colors may have a zero value, but all of the component colors have potentially non-zero values, each of which corresponds to the at least four colors represented by the filters in the color wheel depicted in Figure 4A. (12:42-46;15:24-41)
9. The method of claim 8, further comprising: receiving image data representing said color image in terms of said at least four colors; and generating a <b>formatted data signal</b> including a sequence of	<i>See</i> Claims 1 and 8.  an arrangement of the converted data signal	The converted data is loaded into a frame buffer and format module 78 which arranges the stream of data in a format consistent with the electronic requirements of spatially modulated mask 56. (11:39-42) The frame buffer is divided into bit planes, each bit of which corresponds to one pixel on the spatially modulated mask. (11:47-51) Each bit plane corresponds to a color such that, “if a pixel is to have a component which includes a particular primary color, that pixel is represented by a particular bit on the appropriate bit plane that features that primary color.” (11:52-55) <i>See</i> 11:39-46: “The corrected data is then loaded into a frame buffer and format module 78 which arranges the stream of data in a format consistent with the electronic requirements of spatially modulated mask 56. Frame buffer and format module 78 is a memory device for holding the

		data of the image. Typically, the data is held in the same geometrical arrangement as the pixels of the image, and of spatially modulated mask 56.”
color data <b>arrays</b> , each array including data representing at least part of said image data corresponding to one of said at least four colors.	multi-dimensional data structures or arrangements of data	<i>See</i> 11:47-60: [T]he frame buffer itself, of frame buffer and format module 78, is preferably divided into bit planes. Each bit plane is a planar array of bits, in with each bit corresponds to one pixel on spatially modulated mask 56.”
10. The method of claim 9, wherein said <b>spatially modulating</b> said light comprises	<i>See</i> Claims 1, 5 and 9.	<i>See</i> support stated as to Claim 1.
<b>selectively activating</b> a spatial light modulator based on said formatted data signal to produce a light pattern corresponding to said color image.	controlling the individual pixels of	<i>See</i> support stated as to Claim 5.

## V. DEFENDANTS’ PROPOSED CLAIM CONSTRUCTION IS ERRONEOUS

Defendants’ proposed construction of the term “color image” in claim 1, as used in the preamble and in the claim element requiring “spatially modulating said light of at least four colors in accordance with a data signal to produce said color image” completely misconstrues the patented invention. Defendants propose that “color image” be construed to mean an “image comprised of at least one non-white and non-black color.” (emphasis added) However, Defendants’ proposed construction completely misses the point of the patented invention. As set

forth throughout, claim 1 itself requires that “said color image” be produced by “spatially modulating said light of at least four colors.” (emphasis added) A system that produced the color image comprised of only “one [non-white and non-black] color” would clearly not fall within the scope of claim 1. Genoa refers this Court to the numerous citations to the specification contained in its own proposed specification, all making it clear that “color image” is an image at least portions of which (*i.e.*, pixels) are made up of at least four non-white and non-black colors.

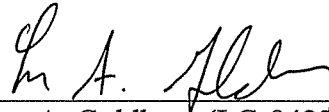
Defendants likewise misconstrue the element of claim 1 requiring “spatially modulating said light of at least four colors in accordance with a data signal to produce said color image.” As explained above, the patented invention marries a data signal representing an image in terms of three component values, *e.g.*, RGB (such as a conventional TV signal) with special modulation and image creation technology that converts the three component data signal to a full color image having at least four primary colors. Defendants’ proposed construction fails entirely to capture and describe the claimed invention.

Genoa disputes Defendants' proposed constructions of a variety of additional claim elements and reserves the right to address them in a reply brief.

Respectfully submitted,

PEARL COHEN ZEDEK LATZER LLP

Dated: April 25, 2008

By: 

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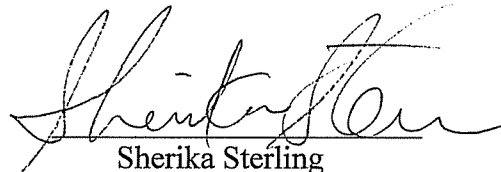
*Attorneys for Plaintiff  
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**CERTIFICATE OF SERVICE**

I hereby certify that service of the foregoing **PLAINTIFF'S CLAIM**

**CONSTRUCTION BRIEF** was made this 25<sup>th</sup> day of April, 2008, by delivering a true and correct copy of the same by Federal Express Priority Overnight to the following:

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